

1. Pressure and/or coining machine for printing on and/or. Beprägen of hollow bodies such as cans, tubes od.dgl., with a conveyor, the hollow bodies successively of a filling station a pressure, which can be worked on, and/or. Embossing station transported, whereby the hollow bodies on disposed spindles rotatable at the conveyor around their longitudinal axis verdrehest supported are, characterised in that a reading device (31) present is, before printing on and/or. Beprägen the trick and/or. Winkellage of the respective hollow body (11) on the basis at least a trade name (36), disposed to it, detected that this hollow body (11) the supporting spindle (7) at least during the durations of the reading operation and itself the subsequent subsequent pressure and/or. Embossing procedure in the pressure and/or. Embossing station (14) a permanent rotary drive (37) for continuous slip-free rotation associated is, and that the rotary drive (37) a control device (38) is associated, those in dependence of the actual layer of the respective hollow body (11), detected by the reading device (31), this in desired target trick and/or. - Winkellage corrected, by it a corresponding change of the spindle rotational speed caused, and subsequent and/or simultaneous for the observance the one for the pressure and/or. Embossing procedure required pressure and/or. Embossing speed ensures.
2. Apparatus according to claim 1, characterised in that the reading device (31) in conveying direction (6) of the conveyor (2) seen before the pressure and/or. Embossing station (14) in a reading station (35) disposed is.
3. Vorrichtung according to claim 1 or 2, characterised in that those the reading device (31) associated, an hollow body (11) supporting spindle (7) during the reading operation one on 360 DEG extending read rotational movement implements itself at least in each case.
4. Apparatus after one of the claims 1 to 3, characterised in that the reading device (31) in dependence of the embodiment and/or. Material condition of the hollow bodies (11) as optical reading device formed is, mechanical mechanisms exhibits or with inductive, capacitive or ultrasonic sensors equipped is.
5. Apparatus after one of the claims 1 to 4, characterised in that the hollow bodies as trade name a read marking (36), which can be seized in each case in its angle of rotation situation, carries, the z. B. in shape of welds, pressure and/or. Embossing pictures od.dgl. formed are.
6. Vorrichtung after one of the claims 1 to 5, characterised in that the reading device (31) the angle of rotation situation regarding the machine clock and/or. regarding the layer of the pressure and/or. Form die impacts (24, 70) in the pressure and/or. Embossing station (14) detected.
7. Apparatus after one of the claims 1 to 6, characterised in that the conveyor (2) cyclically works and the spindles (7) gradually between the single stations (35, 14) transferred, whereby during the reading operation of an hollow body (11) by in particular stationary disposed reading device (31) one Förderpause occurs.
8. Apparatus after one of the claims 1 to 6, characterised in that the conveyor (2) continuous works and the spindles (7) in the frame of a continuous movement of the filling station (10) in the pressure and/or. Embossing station (14) transferred, whereby at least the reading device (31) becomes constant along-moved during the reading operation with the hollow body (11), which can be seized, the supporting spindle (7) and subsequent returns to the initial position.
9. Apparatus according to claim 8 with one in particular as trick and/or. Turret (3) formed conveyor (2), distributed disposed at which the spindles (7) are in circumferential direction (6), are characterised in that the reading device (31) at a pivotal arm (67) disposed and become during the Mitbewegens the corresponding rotational speed of the conveyor (2) along-pivoted, whereby it becomes back-pivoted after completion of the reading operation again into their starting position.
10. apparatus after one of the claims 1 to 9, characterised in that the spindles (7) at the conveyor (2) in particular to each other spaced and in an endless spindle row disposed are, whereby the spindles (7) go through successively the single stations (10, 35, 14), and that the rotary drive (37) of the conveyor (2) separated and vorrichtungsfest in particular formed is, in such a manner that in each case one of the spindles (7) and here at least in each case in the reading station and/or. in the pressure and/or. Embossing station located spindle (7 min, 7 min min) with the rotary drive (37) can be linked.
11. Apparatus after one of the claims 1 to 10, characterised in that a respective spindle (7) during their conveying path between their reading device (31) associated position and the pressure and/or. Embossing station (14) as well as during the reading and pressure and/or. Embossing duration continuous in drive connection with the rotary drive (37) stands, during it the other in conveying direction (6) seen on its other conveying path between the pressure and/or. Embossing station (14) and the reading station (35) at least temporary of the rotary drive (37) separated and/or. disconnected is.
12. Vorrichtung according to claim 10 or 11, characterised in that the rotary drive (37) at least a continuous drive strand drivable to a permanent rotation (48, 48 min) in particular in shape of a toothed belt, a drive chain od.dgl. at least, the one drive wheel (50, 50 min) and one returning wheel (51, 51 min) exhibits and/or. (52, 52 min) loops and that each spindle (7) to that at least one continuous drive strand (48, 48 min) appropriate drive off-ruhr (63) exhibits, during the drive connection into the continuous drive strand (48, 48 min) it intervenes.
13. At least apparatus according to claim 12, characterised in that the continuous drive strand (48, 48 min) in a strand-planar (53, 53 min) rotates, the rectangular to the rotation axis (8) in the reading station (35) and/or. in the pressure and/or. Embossing station (14) located spindles (7) disposed is.
14. In particular apparatus according to claim 12 or 13, characterised in that the continuous drive strand (48, 48 min) beside the spindle conveyor (2) and above this disposed is.
15. Apparatus after one of the claims 12 to 14, characterised in that with the situation correction of a spindle (7), released by the control device (38), and/or. an hollow body (11) also by moving on in the pressure and/or. Embossing station (14) caused relative motion between continuous drive strand (48, 48 min) and the respective spindle (7) considered becomes.
16. Vorrichtung after one of the claims 10 to 15, characterised in that in each case two at the conveyor (2) in conveying direction (6) seen successive disposed spindles (7, 7 min, 7 min min) essentially simultaneous in drive connection with the

rotary drive (37) stand, whereby their rotational speed is then independently more controllable and whereby in particular a spindle (7 min) stands in drive connection with the rotary drive (37), if them are the reading device (31) associated, whereby itself the other, likewise spindle coupled with the rotary drive (37) (7 min min) in the pressure and/or. Embossing station (14) finds.

17. Vorrichtung after one of the claims 12 to 16, characterised in that the rotary drive (of 37) two continuous drive strands (48, 48 min) exhibits, which arrive to alternate in drive connection with the spindles, whereby in conveying direction adjacent spindles are associated to the drive different drive strands (48, 48 min).

18. Apparatus according to claim 17, characterised in that each spindle (7) with radial a in particular, verdrehfest disposed drive off-hurries (63) for propelling the spindle to a rotational movement and with one opposite the spindle (7) free rotatable, in particular radial return-hurries (62) is provided, whereby that in each case continuous drive strand (48) with drive off-hurry (63) and that different drive strand (48 min) with return-hurry in each case (62) co-operates.

19. Vorrichtung according to claim 17 or 18, characterised in that both continuous drive strands (48, 48 min) at least in their spindles (7) associated working portion (57, 57 min) in to each other parallel plane (53, 53 min) next to each other run, whereby drive off-hurry (63) and return-hurry (62) the spindles (7) in axial direction (8) of the spindles (7) next to each other disposed are and whereby drive off-hurry (63) and the returning wheel (62) successive in each case spindles (7 min, 7 min min) regarding their axial position is exchanged, in such a manner that drive off-hurry (63) a spindle (7 min) essentially in a common, rectangular to the spindle axis of rotation (8) disposed radial plane with return-hurry (62) the adjacent in each case spindle (7 min min) disposed is.

20. apparatus after one of the claims 17 to 19, characterised in that each continuous drive strand (48, 48 min) a separate drive motor (50, 50 min) associated is.

21. Apparatus according to claim 20, characterised in that the drive motor (50, 50 min) a dynamic servomotor is and a tacho-alternator (46, 46 min) and/or. a tachometer as well as a pulse generator (47, 47 min) for the detection of the speed and the Winkellage of the motor shaft exhibits.

22. Apparatus after one of the claims 1 to 21, characterised in that the conveyor (2) a trick and/or. Gun plate (3) with an even number of spindles (7) is, whereby return-hurry (62) and in particular drive off-hurry (63) a respective spindle (7) at the rotation plate backside (54) disposed are, during itself at the plate front side the plug apparatus (8) of the spindle (7) for the hollow bodies (11) finds.

23. Apparatus after one of the claims 1 to 22, characterised in that the spindle (7) a drive unit (21) and a plug apparatus (8) contains, which both are verdrehfest connected with one another, whereby the plug apparatus (8) is more replaceable.

24. Apparatus after one of the claims 1 to 21 or 23, characterised in that the conveyor (21) a in particular oval conveyor belt is, which exhibits an even number of spindle in.